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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,619	09/15/2003	Hyun Jin Kim	0EKM-104792	9762
30764 7590 06/04/2007 SHEPPARD, MULLIN, RICHTER & HAMPTON LLP 333 SOUTH HOPE STREET 48TH FLOOR LOS ANGELES, CA 90071-1448			EXAMINER TRIMIEW, RAEANN	
			ART UNIT 3711	PAPER NUMBER
			MAIL DATE 06/04/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/662,619	KIM ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Raeann Trimiew	3711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-41, 48, 50-53, 55-57, 63 and 64 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-41, 48, 50-53, 55-57, 63 and 64 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

**After further consideration the finality of the last office action is withdrawn. The amendment filed 6-6-06 has been entered.**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-22, 24-38, 40, 41, 48, 51, 53, 56, 57, 63 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohama (2001/0031669). Regarding claims 1 and 41, Ohama discloses a golf ball core composition comprising 1,4-polybutadiene, peroxide (crosslinking agent), pentachlorothiophenol (peptizer) and 2-mercaptobenzothiazole (accelerator). Ohama broadly disclose the use of pentachlorothiophenols but does not disclose specific types such as metal salts or nonmetal salts. However, for purposes of the instant invention the metal salts and non-metal salts appear to be equivalents. Regarding claims 2-5, pentachlorothiophenol (peptizer) is present in the amount from 0.2 to 3.0 parts by weight. Regarding claims 6-9, 2-mercaptobenzothiazole (accelerator) is present in the amounts from 0.2 to 3.0 parts by weight. Regarding claims 10-12, peroxide (crosslinking agent) is present in the amount from 0.3 to 2 parts by weight. Regarding claim 13, the core composition is

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made from 1,4-polybutadiene. Regarding claims 14-17, the core composition includes filler such as zinc oxide and barium sulfate in the amounts from 5 to 30 parts by weight. Regarding claims 18 and 19, the core composition includes metal salts unsaturated carboxylic acid in the amount from 15 to 30 parts by weight. Regarding claim 20, the golf ball includes a core and cover, wherein the core is made from the composition (see above). Regarding claim 21, the core may include multiple layers, i.e. intermediate layer. Regarding claim 22, the state of the materials during manufacturing does not appear to affect the final product since the composition results a solid. Regarding claim 24, the golf ball includes a core, intermediate layer, and cover, wherein the core is made from the composition. Regarding claims 25-28, Ohama discloses a golf ball core composition comprising 1,4-polybutadiene, peroxide (crosslinking agent), pentachlorothiophenol (peptizer), and 2-mercaptobenzothiazole (accelerator). Peroxide (crosslinking agent) is present in the amount from 0.3 to 2 parts by weight. Pentachlorothiophenol (peptizer) and 2-mercaptobenzothiazole (accelerator) are present in combination from 0.2 to 3.0 parts by weight. Ohama broadly disclose the use of pentachlorothiophenols but does not disclose specific types such as metal salts or nonmetal salts. However, for purposes of the instant invention the metal salts and non-metal salts appear to be equivalents. Regarding claim 29, the core composition is made from 1,4-polybutadiene. Regarding claims 30-33, the core composition includes filler such as zinc oxide and barium sulfate in the amounts from 5 to 30 parts by weight. Regarding claims 34 and 35, the core composition includes metal salts unsaturated carboxylic acid in the amount from 15 to 30 parts by weight. Regarding claim 36, the

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golf ball includes a core and cover, wherein the core is made from the composition (see above). Regarding claim 37, the core may include multiple layers, i.e., intermediate layer. Regarding claim 38, the state of the materials during manufacturing does not appear to affect the final product since the composition results a solid. Regarding claim 40, the golf ball includes a core, intermediate layer, and cover, wherein the core is made from the composition. Regarding claims 48 and 53, the core composition includes metal salts unsaturated carboxylic acid. Claims 50 and 55, pentachlorothiophenol (peptizer) is present in the amount from 0.2 to 3.0 parts by weight. Regarding claim 51 and 56, the composition includes dicumyl peroxide. Claims 52 and 57, the crosslinking agent may be 2, 5-dimethyl-2,5-di-(t-butylperoxy)hexyne-3. Claims 63 and 64, the cross linking agent may be 1,1-bis(t-butylperoxy)-3,3,5 tri-methylcyclohexane. One of ordinary skill in the art would substitute the non-metal salts for the metal salts since both appear to have the same function.

Claims 23 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohama (2001/0031669) in view of Sullivan (2001/0000506). Ohama discloses the invention but does not disclose a wound layer. Sullivan teaches a golf ball comprising a solid or wound layer over the core. One of ordinary skill in the art would include wound layer for lower manufacturing costs.

### ***Response to Arguments***

As noted above the claims filed 6-6-06 have been entered and have been rejected as shown above. The final office action was withdrawn to remove the

secondary reference (Hayashi) from the rejection as well as to include claims 50 and 55 in the rejection. After further review of the specification it appears as if the metal and non-metal salts thiophenols are equivalents or interchangeable. The Examiner is requesting applicant to provide scientific data showing the difference(s) between the golf balls comprising the metal salts versus the golf balls comprising the non-metal salts. The specification currently shows the two as equivalents and does not provide any explanation with regard to the effects of using one over the other in the instant invention.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raeann Trimiew whose telephone number is 571-272-4409. The examiner can normally be reached on Mon-Fri 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eugene Kim can be reached on 571-272-4463. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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/Raeann Trimiew/  
Primary Examiner  
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May 28, 2007